

**BROWNSTONE AND ROWFRAME
BUILDING FIRES****CONTENTS**

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1. GENERAL

1.1 Introduction

- 1.1.1 This bulletin describes the initial operations, assignments and use of tools at fires in Brownstone and RowFrame buildings.
- 1.1.2 This bulletin will be considered as the operating procedure for both types of buildings. While all situations cannot be covered in this bulletin, the areas of responsibility listed with the specific assignments of members should be followed as closely as the situation permits.
- 1.1.3 The general concept of "Firefighting Procedures, Ladder Company Operations III, Volume III-Book 3, Tenements" (hereafter referred to as Ladders 3) has been incorporated into this bulletin. All members are urged to study both bulletins and to become thoroughly familiar with the variations described later in this bulletin.
- 1.1.4 *All members shall comply with the provisions of AUC 329. When giving assignments, the Officer on duty shall ensure members are reminded of their designations as safety team members. These members must be aware that this designation is based on their unit's order of arrival at the box and will change as additional units arrive. While operating members shall pay particular attention to the following provisions of Sections 1.2 and 1.3 which state:*

“When a fire progresses past the incipient stage, the fire area must be considered an IDLH atmosphere. Every member entering the IDLH must be equipped with personal protective equipment and a self-contained breathing apparatus. No member shall enter an IDLH atmosphere unless the member teams-up with at least one other member and remains within voice or visual contact with that member.”

“If a known life hazard is found and immediate action could prevent the loss of life, appropriate action (rescue activity) may be taken by the individual member. This applies only for a known life hazard, not for standard search and rescue activity. If such action is take, the Incident Commander must be immediately notified and appropriate adjustments made.”

1.2 GENERAL VENTILATION PRINCIPLES

SAVING LIFE IS THE PRIMARY FUNCTION OF LADDER COMPANIES.

Any immediate, limited ventilation is justified if it is coordinated between the inside team and the outside team and it will help facilitate an interior search for occupants. Bear in mind that ventilation for search purposes will generally intensify the fire and could endanger other occupants of the building. The following principles of ventilation are of importance in carrying out assignments:

1.2.2 VERTICAL VENTILATION

THIS TYPE OF VENTILATION ENTAILS OPENING THE ROOF LEVEL SKYLIGHTS AND SCUTTLE. This is the proven and accepted type of ventilation to be used in the initial stage of operations. It should be performed for the following reasons:

- A. Relieves the upper portions of the building of heat, smoke and gases. This prevents mushrooming and possible early extension of the fire. At the same time it increases the survival time of unconscious or trapped victims.
- B. Permits more thorough search and examination above the fire.
- C. Relieves the public hall and stairs of smoke and heat, aiding the escape of occupants.
- D. Relieves the public hall and stairs of heat and smoke to allow an aggressive interior fire attack.
- E. Creates a vertical draft which channels the products of combustion, limiting horizontal spread and making control easier.
- F. Permits advance above the original fire area to search and cut off fire extension.

Note: The large skylight and draft stop over the stairs pose the problem of falling glass injuring tenants or fire personnel.

1.2.3 LATERAL (HORIZONTAL) VENTILATION

THIS TYPE OF VENTILATION ENTAILS THE OPENING OR REMOVAL OF THE WINDOWS OF THE FIRE APARTMENT OR FIRE AREA IN ORDER TO:

- A. Permit rapid advance of the attack line to the immediate fire area.
- B. Reduce danger of heat and/or flame passing over or around the attack line, since the smoke and heat are permitted to escape through these controlled openings.
- C. Make thorough search procedures easier on upper floors as well as on the fire floor.

Note: In A and B above, this lateral ventilation is usually affected after a charged line or lines are in position.

1.2.4 **Vent for fire** is accomplished to facilitate the engine company advance to, and extinguishment of, the fire. This venting is normally delayed until the engine company has its water, and is ready to move in.

1.2.5 **Vent for life** is accomplished to facilitate movement of members into an area where there is a known or suspected life hazard. With an inherent calculated risk of eventually pulling fire, it is performed as part of an attempt to reach possible survivors as soon as possible. These actions must be coordinated with the inside teams.

Note: Lateral ventilation must be coordinated between the inside and outside teams.

1.2.6 Examples - Fire, Top Floor, Rear

Situation No. 1 - Venting for Fire

Roof firefighter will vent rear windows from the roof to facilitate engine company advance to and extinguishment of the fire. Subsequent venting of the front windows to improve the top floor environment may be accomplished after the engine company has commenced its top floor operation.

Situation No. 2 - Venting for Life

Ordinarily, in Situation No. 1, the top floor front windows would not be vented immediately. However, they may be so vented by the chauffeur when it is his/her intent to enter these front rooms, via ladder, to search for possible occupants ***when teamed up with another available member.***

Note: In some situations one operation will encompass both types of ventilation.

2. BROWNSTONES

2.1 General Description

2.1.1 Brownstone buildings were built in the late 1800's as private dwellings. They are three to five stories in height with a cellar. **In brownstones, the basement is the first floor** (See Figure 1). The interior is of combustible construction, while the exterior shell is made of non-combustible material. Their width is 20 to 25 feet, and their depth varies to about 60 feet.

2.1.2 The original layout of the interior rooms is as follows:

- A. The first floor (basement) was composed of a kitchen in the rear with a dining room in the front, and an interior stairway to the second floor (parlor) and cellar. There is also a large closet. This is the only floor with two means of egress to the outside.
- B. The second floor (parlor) contained the front and rear parlor rooms, a hall, bedroom in the rear and the main entrance to the building.
- C. The third and fourth floors contained two bedrooms each, with hall rooms in the front and the rear, off the stairway. These may have been bedrooms or bathrooms.

Note: When searching the upper floors, do not overlook the possibility of small bedrooms having their only entrance from the hall. These rooms can be found in the front or the rear. Generally, these rooms have only one means of egress to the interior hall, causing occupants to be trapped when fire has possession of the open interior stairs. Because of this, these rooms have been referred to as the "deadman's" room.

- 2.1.3 The entrance to the second floor (parlor) is usually by way of exterior stair or stoop. Entrance to the first floor (basement) is through a doorway located under the exterior stoop. Interior wooden stairs connect the cellar and first floor (basement), and first floor (basement) and second floor (parlor). An open interior stair connects the second floor (parlor) and upper floors. An iron ladder gives access from the top floor to the roof through a scuttle.

2.2 OTHER FEATURES ENCOUNTERED

- 2.2.1 Brownstones are often found to occupy entire blocks or section of them. When built at the same time, and by the same contractor, they are normally of the same height.
- 2.2.2 Originally bars were often encountered on both front and rear first floor (basement) windows and iron gates beneath the front stoop, negating access and egress. Additional bars and gates may be found on upper floors (See Figure 2).
- 2.2.3 There is normally a rear entrance from the yard to the first floor (basement) (See Figure 3).
- 2.2.4 The need for 10-foot hooks, to pull ceilings on the second floor (parlor floor), may exist in some Brownstone buildings.
- 2.2.5 Ceilings on the second floor (parlor floor) have much ornamental plasterwork. It is often in the center and around the perimeter of the room. Use caution when pulling ceilings. The weight of this plaster can cause serious injury to members operating in the area.
- 2.2.6 In some instances these buildings have been renovated by removal of the front stoop converting the former first floor (basement) entrance to the main access for the building.
- 2.2.7 In many buildings, when they were converted to Multiple Dwellings, fire escapes were added or sprinklers were installed in the interior halls in lieu of secondary means of egress. Sprinkler lines were further extended into individual rooms when buildings were converted to Rooming Houses. The presence of these sprinklers may indicate the absence of a fire escape. **MOST BROWNSTONES, HOWEVER, DO NOT HAVE FIRE ESCAPES.**
- 2.2.8 In many instances these buildings are being utilized as "illegal" Multiple Dwellings with single room occupancies or entire families found on all floors, without the required fire escape or sprinklers.

- 2.2.9 Due to the poor integrity of individual rooms and areas, the single open interior stair often becomes involved in fire and/or heavily charged with smoke. Build up of heat and smoke on the top floor is extremely rapid, and since the buildings were originally constructed without secondary means of egress, occupants are often trapped above the fire. **IMMEDIATE VENTILATION, ENTRY AND SEARCH (VES) OF THE TOP FLOOR IS MANDATORY, AND IS CONSIDERED TO BE ONE OF THE MOST IMPORTANT OPERATIONS AT THESE FIRES.**
- 2.2.10 Doors at top of cellar and first floor (basement) stairs normally prevent the immediate extension of cellar fires up the main interior stairs. However, there will be a rapid build-up of smoke and heat on upper floors and initial operations will remain the same.
- 2.2.11 The cellar fire is peculiar in that there are limited means of venting the cellar. The most that can be expected are a couple of very small windows at ground level in the rear, an opening under a grating near the first floor (basement) vestibule, and possibly a coal chute. It is a punishing operation for the engine company to advance down the one interior stair. It might be necessary for the ladder company to cut holes in the first floor (basement) flooring, near windows opening to the outside of the building in order to adequately ventilate the cellar. A charged line should be in position.
- 2.2.12 Rear extensions also have been added on the first floor. In some cases these extensions may be two or three stories in height, and 10 to 20 feet in depth (See Figure 3). They will have their own cockloft.
- 2.2.13 Duplex Apartments: In certain areas of the city, it has become popular to convert to duplex apartments. Each conversion will present its own unique problems. The following is a list of construction features that may be found:
- A. Access to the apartments:
 - 1. It is common to have one apartment on the first (basement) and second (parlor) floors and the other apartment on the third and fourth floors, with each apartment having its own separate entrance.
 - 2. In Brownstone conversions of this type, where the high stoop remains in place, access to the lower apartment will usually be the entrance under the stoop. Ascending the stoop will provide entrance to the apartment on the upper floors.
 - B. Partial areas of the floors may be cut out to create two story-high ceilings and balconies.
 - C. Open, unprotected stairs between floors within each apartment.

Note: In some cases, ventilation of the roof will only provide ventilation for the apartments on the upper floors.

2.2.14 Other popular conversions may include a penthouse. These structures are constructed on the roof. They are usually accessed via the apartment on the top floor, creating a duplex apartment.

Note: This is only a partial list. Companies with conversions in their response areas must be aware of the problems presented in each conversion, and adjust their operations to meet these problems. For example, routes for engine companies stretching lines may differ from standard Brownstone operations. Ladder company operations may differ in access to, and VES of, the floor above the fire.

2.2.15 Roof construction is also varied:

- A. The majority are flat construction with no parapet in rear (see Figure 4).
- B. Some have a center peak which slopes toward the front and the rear (See Figure 3).
- C. A third type has more floors in the rear than in front. There may be five stories in the rear with full windows. The roof slopes to the front where there are small front windows making access to and removal of trapped persons from these areas difficult. This creates a communication problem when making a size up (See Figure 5).

2.2.16 Access to the roof is via the iron ladder leading up to the scuttle opening (See Figure 4). The ladder is usually in a closet.

2.2.17 Figures 6 and 7 illustrate other roof and attic construction features found in Brownstone buildings that may affect fire operations.

2.2.18 In flat roof buildings, the cockloft space between the top floor ceiling and the roof is approximately 2' to 3' in height and the roof is pitched toward the rear of the building.

2.3 **EXTENSION AND SPREAD OF FIRE**

2.3.1 The Brownstone is similar to the tenement in interior construction in that it is basically non-fireproof (NFP).

2.3.2 The fire is generally confined to the original fire building, although there may be some spread in cellars due to beams of adjoining buildings butting up against one another, and in the cockloft due to the deterioration and faulty construction in division walls. Fire can also extend to adjoining buildings via the cornice and/ or the "Yankee gutter" (See Figure 8).

- 2.3.3 In addition to typical problem areas associated with NFP buildings, particular points of examination inside the Brownstone should include dumbwaiter shafts, hot air ducts and registers running throughout the building and pockets in the walls on the second floor (parlor floor) constructed to facilitate the operation of sliding doors (pocket doors).
- 2.3.4 Some Brownstone buildings may have open stairs in the rear of the building. They usually go from the first (basement) to second (parlor) floors. This is separate from the main staircase. Their original use was for servants. Fire may extend via these stairs.
- 2.3.5 The large open stairway with wood paneling provides a continuous combustible flue from the second floor (parlor floor) to the roof. This will allow fire to spread rapidly and cut off escape of the occupants.
- 2.3.6 Transom windows, which may be found over the interior doors, can fail under fire conditions and allow heat and smoke into the hall areas. This also will allow fire to spread more easily.

2.4 GENERAL AREAS OF RESPONSIBILITY

2.4.1 First Ladder Company to Arrive

- A. Ladder company operations on fire floor.
- B. Determine life hazard and rescue as required.
- C. Roof ventilation and a visual check of rear and sides from this level.
- D. Ladder as needed.
- E. Vertical and horizontal ventilation.
- F. Rear of building:
 - 1. Visual examination *
 - 2. Ventilation

** The basement has a rear door which opens into the yard. This is a fast way to check the rear for trapped occupants.*
- G. If second ladder company will not arrive within a reasonable time, make interior search and removal of endangered occupants above the fire.

2.4.2 Second Ladder Company to Arrive

- A. All floors above the fire floor for search, removal, ventilation and to check for fire extension.
- B. Confirm roof ventilation (assist first unit).

- C. Check rear and sides of buildings.
- D. Reinforce laddering and removal operations when necessary.
- E. Examine exposures as conditions require.

Note: Due to narrow stairs and landings, do not crowd or impede the operation and movement of the first attack line.

2.5 ASSUMPTIONS

There is a light-to-medium fire situation within the building with one or more rooms involved and both ladder companies and required engine companies will arrive at the scene.

Light Fire Situation. Indicates a fire which can be extinguished with the operation of one hand line and/or hand extinguishers or those that can be readily extinguished without resorting to extinguishing agents.

Medium Fire Situation. Indicates a fire which may be extinguished with the operation of two hand lines.

- 2.5.1 Ladder Companies will institute a two-team offense that will cover their area of assigned responsibility.

INSIDE TEAM:

- A. Officer
- B. Forcible Entry Firefighter
- C. Extinguisher Firefighter

OUTSIDE TEAM:

- D. Chauffeur
- E. Outside Vent Firefighter (OV)
- F. Roof Firefighter

- 2.5.2 For the purposes of this bulletin we are assuming the fire building to be a four-story structure, cellar, first floor (basement), second floor (parlor), plus two additional floors.

- 2.5.3 Variations of this operational procedure, based on structural changes from this assumed structure, will be the responsibility of the company officer.

2.6 FIRST LADDER COMPANY TO ARRIVE

INSIDE TEAM

A. OFFICER (*First Arriving Ladder - Brownstone Building*)

TOOLS: Handie Talkie (HT)
 Flashlight
 Officer's tool

POSITION:

Door to the fire floor or fire area.

DUTIES:

1. Perform an immediate size-up and give necessary orders.
2. Insure that entry doors at street level are chocked open to enable the stretching of hand lines or access by other members.
3. Take command of forcible entry, locate the fire, search and remove victims.
4. Maintain control of door to the fire area.
5. Decide whether entry into the fire area by the inside and outside team can be made in safety before a charged line is in position.
6. Control the horizontal ventilation on the fire floor by the inside and outside team.
7. Proceed to the seat of the fire and try to contain it by shutting a door or using a portable extinguisher. A thorough primary search must be started at this point. Ventilate as required in order to conduct this search, keeping in mind that the fire can be drawn to the area vented. Verify that all parts of the fire floor have been covered.
8. Inform the engine company officer of fire location and any unusual layout that will cause difficulty in reaching the fire. Provide and maintain an unobstructed path through which the hose line can advance. Furniture, appliances or other articles blocking the advance of the line will have to be moved.
9. Be aware of structural features that would endanger exposures or permit extension, such as shafts, voids, etc. Relay necessary information to the Incident Commander (IC).
10. Be aware of and await return of members operating in other locations, Secure information regarding their observations and operations. If any member has not been accounted for in a reasonable time, take prompt action to locate him/her.

11. Company officers must maintain communication with members of the outside team not operating under their immediate supervision, to determine their status. The interval between contacts should be frequent enough to provide for the safety of the firefighter being monitored without monopolizing the HT frequency. This is "Functional Supervision".
Note: Members are under the "Immediate Supervision" of an officer when:
 - A. They are within sight and/or hearing of the officer.
 - B. They are working with a search line or hose line which is under the supervision of an officer.
12. Insure the safety of his/her members on the fire floor by close supervision. Prior training, combined with adequate communications and control on the fire ground, is necessary for the safety of all members.
13. Control operations on fire floor that will affect members operating on floor above, e.g. closing a door. Be aware of changing conditions on the fire floor which could endanger units operating on the floors above.
14. Inform members operating above the fire as to the location of the fire on the fire floor. This will enable them to check for extension in the area directly exposed.
15. *When necessary, ensure members are reminded of their designation as safety team members.*

B. FORCIBLE ENTRY FIREFIGHTER (*First Arriving Ladder - Brownstone Building*)

TOOLS: Axe/Halligan(Maul/Halligan)
 Rabbit tool
 Flashlight
 HT*
 * in some areas this member is assigned a HT

POSITION:

Door to the fire floor or fire area.

DUTIES:

1. Forcible entry.
2. Immediate search and removal of victims.
3. Locate the fire.
4. Ventilate as required and ordered.

C. EXTINGUISHER FIREFIGHTER (*First Arriving Ladder - Brownstone Building*)

TOOLS: 6' Hook
 Pressurized water extinguisher
 Flashlight

POSITION:

Door to the fire floor or fire area.

DUTIES:

1. Assist in forcible entry.
2. Search and removal of victims.
3. Locate the fire.
4. Use the extinguisher where it can be of any possible help.
5. Ventilate as required and ordered.

OUTSIDE TEAM

D. CHAUFFEUR (*First Arriving Ladder - Brownstone Building*)

The chauffeur must have a working knowledge of the duties and responsibilities of all members of first alarm ladder companies and how they are likely to execute their assignments under different fire situations. Monitoring the HT will be of assistance in making decisions. The chauffeur should have the ability to evaluate a problem and then make a sound decision to cope with it.

TOOLS: HT

Flashlight

The chauffeur shall select the tools that he/she deems necessary to complete assignment.

POSITION:

The front of the fire building.

The chauffeur of an aerial ladder shall not operate in a manner that will in any way impede his/her return to the pedestal and cause a delay in positioning or repositioning the aerial for rescue or removal operations.

The chauffeur must notify his/her company officer of intended destination when leaving this primary position.

DUTIES:

1. Position and prepare apparatus for complete coverage. If unable to complete this assignment, the IC must be notified.
2. Raise aerial to roof.
3. Wait for completion of roof size-up.
 - A. If roof firefighter indicates need for a Life Saving Rope (LSR) rescue, the chauffeur shall proceed to roof to assist.
 - B. If roof firefighter indicates no need for rescue, chauffeur will place ladder to top floor for VES as necessary. ***He/she shall team up with the 2nd chauffeur (or another available member).***
 - C. When a fire denies the use of the interior stair to the occupants and there is no rear fire escape, **top floor VES is mandatory** if we are going to reach persons who are in a hazardous position, or who have already been overcome.

- D. Generally, the window over the main entrance opens into one small room (on all upper floors). The other two windows open into a large room which originally, and in many cases still is, connected railroad fashion to other rooms deeper in the building. **It is best to select one of these windows for VES, instead of the window over the main entrance.**
 - E. In fire involving interior stairs, egress from the small room above the main entrance (on each floor) may be cut off. A similar type room may be found in the rear. Early attention must be given to search of these rooms.
4. The only variation from this procedure shall be when there is a known life hazard at another location requiring action, e.g.
- A. Aerial ladder rescue on the front of the building.
 - B. Portable ladder rescue on the front of the building.
- Note:** This involves the principle of taking care of known life hazard before moving toward an area of possible life hazard.
5. If there is fire on the 3rd floor of a four-story brownstone it can readily be seen that entry into the top floor via aerial may be negated until the fire has been darkened down. The chauffeur will wait until the possibility of lapping fire has been eliminated, then vent all windows on top floor. Entry into the top floor via aerial may then be attempted, ***when teamed up with another available member***, if second arriving ladder company has not already “made” the top floor via the interior.
6. For a fire in a completely sprinkled building, where the fire is normally confined to one room, top floor VES via aerial is usually not needed. Chauffeur will enter cellar to shut down sprinkler at the Outside Stem & Yoke (OSY) valve, on officers direction.
- Note:** With fires on the lower floors, a heavy concentration of carbon monoxide (CO) may be present in the cellar.
7. For a Top Floor Fire:
- A. Raise and position aerial to roof of exposure for use by roof firefighter and OV (who will be going to roof).
 - B. Commence venting top floor windows as coordinated with the Inside Team.

- C. The top floor fire often permits search of all but the immediate fire area by members of the Inside Team. One of these members may make his way to a front window to inform the chauffeur that they are "in", relieving him/her of the necessity of performing VES from the aerial.

If he is not contacted by a member of the Inside Team however, the chauffeur must assume that they have been unable to get past the fire, or are otherwise heavily engaged. In such instances and where fire conditions permit, he should attempt entry and search. ***Prior to entry and search of the top floor, the chauffeur shall team up with the 2nd chauffeur (or another available member).***

The chauffeur must notify the officer of the Inside Team before entry is made.

- D. Once assured that laddering is not needed, or after VES has been completed, the chauffeur will report to his/her officer with whatever tools necessary, keeping in mind that maximum utilization of 6-foot hooks is expected at top floor fires.

E. OUTSIDE VENT (OV) POSITION (*First Arriving Ladder - Brownstone Building*)

TOOLS: 6' hook
Halligan tool
Flashlight
HT

Note: For top floor fires the saw is taken in place of the hook.

POSITION:

1. Assist the chauffeur in front of the fire building when aerial or portable ladders are needed for rescue or removal.
2. Check the rear of building for trapped occupants.
3. **Top Floor Fire:** Take the saw to the roof.

DUTIES:

1. Assist Chauffeur in any ladder rescue that may be required on the front of the building.
2. **NO FRONT LADDER RESCUE REQUIRED**
If ladder rescue is not required at the front of the building, the OV shall immediately make his/her way to the rear, to check for the life hazard and to perform outside vent of floors within reach.
 - A. When necessary to vent the second floor, the option of utilizing a 10-foot hook will assure venting of both upper and lower panes of 2nd floor level while placing the member out of range of falling glass.
 - B. The 10-foot scissor ladder is also a useful tool for the OV. It can be used to accomplish the following:
 - ◆ In closed position it can be used for venting.
 - ◆ ***Access to 2nd floor for VES. Prior to entry and search, he/she shall be teamed up with another available member.***
 - ◆ Access to roof of 1 story setback.
 - ◆ ***Access to 3rd floor from roof of setback for ventilation. Prior to entry and search, he/she shall be teamed up with another available member.***
 - ◆ Provide means of climbing fences.

3. REAR RESCUE NEEDED

If on arrival at the rear a person is seen trapped on an upper floor, the OV should do the following:

- A. Notify the company officer and the IC of the floor and the exact location of the victim.
- B. If there is a rear fire escape, ascend same and assist victim.
- C. If there is no rear fire escape, reassure victim and determine if a portable laddering operation is practical.
- D. If the OV determines that a laddering operation **is practical**, he/she may initiate such an attempt. Generally, there is less effort and manpower involved than a LSR rescue. It is usually a safer operation for the members involved. In this case the OV should:
 - 1. Notify the IC.
 - 2. Determine what size ladder is necessary
 - 3. Determine the most accessible route to rear.
- E. If the OV determines that it **is impractical** to get a portable ladder to the rear due to room layout, hallways, remodeling, fences between buildings, etc., the OV will have to make a decision whether to stay in the rear reassuring the victim that help is on the way or proceed to the roof and assist with a LSR rescue.

This decision should be based on:

- ◆ The emotional state of the victim.
- ◆ The fire / smoke condition in the immediate vicinity of the victim.
- ◆ The location and severity of the fire, e.g. second floor (parlor floor) of fire building or adjoining building.

4. NO REAR RESCUE NEEDED

When no rear rescue is needed and the OV is able to enter and search, he/she shall be teamed up with another available member. If unable to team up with another member or if unable to enter for search, he/she should return to the front of the building to team up with the chauffeur for top floor VES.

5. BUILDINGS WITH FIRE ESCAPES

A. Due to conversions to multiple dwellings, some of these buildings may have fire escapes. If such is the case, the OV will operate as outlined in Ladders 3. *He/she shall team up with the roof firefighter (or another available member) to VES the fire floor and, if not needed for search on that floor, proceed to VES the floors above.*

B. It is **extremely important** for the OV to notify his/her officer and the IC of the presence of a rear fire escape via the HT.

6. TOP FLOOR FIRE

For a fire on the top floor, the OV will proceed to roof with saw and halligan tool. *If possible, descend the fire escape and perform ventilation of the top floor. Prior to entry and search, he/she shall be teamed up with the 2nd OV (or another available member).*

If unable to descend the fire escape, notify company officer and attempt to vent fire apartment from roof level and then assist with roof ventilation.

F. ROOF POSITION (*First Arriving Ladder - Brownstone Building*)

TOOLS: Halligan Tool
6' Halligan Hook
Flashlight
HT
Life Saving Rope (LSR)

POSITION:

THE ROOF OF FIRE BUILDING. Roof ventilation is critical for search, rescue and extinguishment of the fire. NOTHING SHALL DETER the member assigned the roof position from carrying out his/her assigned duties. The duties of the roof firefighter demand an experienced, observant and determined firefighter capable of decisive action.

ACCESS TO THE ROOF: (*Order of Preference*)

1. AERIAL LADDER

- A. Access through adjoining building is often difficult and undependable.
- B. Eliminates possibly time consuming forcible entry and needless structural damage to other than the fire building.
- C. Scuttle ladders, the usual means of access to the roof, are often loose, broken, or missing.
- D. Scuttle covers are often locked, chained, nailed and/or completely tarred over.
- E. Area in vicinity of scuttle ladder is frequently used for storage of excess household furniture, bicycles, boxes of clothing, etc.
- F. Size of scuttle opening is narrow, making it difficult to get through, especially with a mask, tools and LSR.
- G. As will be noted in a subsequent section, the aerial normally will be raised at these operations to facilitate VES of top floor.
- H. With the roof firefighter ascending via aerial, there is visual assurance that member is in position.
- I. The aerial will be in position for rapid ascent by the chauffeur and additional personnel, in the event immediate LSR rescue in the rear is required.

Note: When using aerial for access to roof, have the roof firefighter assist the chauffeur in setting up the apparatus for the operation.

2. **2nd ARRIVING AERIAL LADDER (IF AVAILABLE)**
3. **ACCESS VIA ADJOINING BUILDINGS (Secondary)**
 - A. Aerial ladder rescue must be performed.
 - B. Apparatus will be blocked out of the street or otherwise delayed.
 - C. Street conditions, e.g. overhead wires, trees, etc., will negate the use of the aerial.
 - D. The roof firefighter should use the building offering easiest access to its interior as indicated by persons on the stoop, lights in either basement or parlor windows, etc. obviating the need for forcible entry or the possibility of encountering prolonged delay.

DUTIES:

The responsibility of this position covers three broad areas:

- ◆ Life
- ◆ Communication
- ◆ Ventilation

1. Take out the glass skylight immediately over the interior stair. Reach down with hook to break glass draft stop at ceiling level.

Units below shall be warned by HT prior to breaking glass. Always break out a small piece of glass first, as a warning to members moving up the stair below, before breaking the remaining larger sections of glass. Members moving up stairs should stay close to wall, keeping hands off stair rail until all skylight glass has dropped.
2. Survey the rear, courts, and shafts of the building for trapped occupants and/or persons who have jumped into the yard. Check also for presence of fire escapes. **Notify the officer if there is a rear fire escape.**

NOTE: VENTILATION OF SKYLIGHT AND DRAFT STOP SHOULD BE DONE PRIOR TO CHECKING THE REAR.

3. IF TRAPPED OCCUPANTS ARE NOTED
 - A. Assure the victim help is on the way. This is necessary to deter the victim from jumping, keeping the victim at the window until they can be reached via the interior or from the exterior.
 - B. Contact the company officer via HT, informing him/her of the exact location of the trapped occupant, so a concentrated inside rescue attempt may be made. An acknowledgment of the above message must be received.
 - C. If a LSR rescue is required, contact the chauffeur via HT for assistance on the roof. If the aerial ladder is to be used as a substantial object to tie off the LSR, notify the chauffeur to reposition if necessary.
4. IF NO TRAPPED OCCUPANTS ARE NOTED
 - A. Notify the chauffeur that rescue operation is not needed.
5. Vent windows to upper floors (be careful of creating an auto-exposure). This operation is based on the members carrying utility cords. Their presence should be verified at roll calls, along with protective clothing, gloves, flashlight, chocks, etc.
6. Open any remaining skylights.
7. Open up roof scuttle cover.
 - A. Persons attempting to escape via the roof may have been trapped and / or overcome under the scuttle enclosure.
 - B. There may be a door on the closet leading to the scuttle. Fire or excessive heat may be immediately behind the door.
Do not descend the scuttle ladder to open this door.
8. IF BUILDING HAS A REAR FIRE ESCAPE:
After completing roof duties, the roof firefighter will operate as per Ladders 3. He/she shall team up with the OV (or another available member) to VES the fire floor and, if not needed for search on that floor, proceed to VES the floors above. Member will notify officer via HT that he/she is leaving primary area of responsibility and initiating such search. **THE SCUTTLE LADDER SHALL NEVER BE USED TO DESCEND TO THE LOWER FLOORS UNLESS THE FIRE IS UNDER CONTROL.**

9. IF THERE IS NO REAR FIRE ESCAPE

After completing roof duties, the roof firefighter will:

- A. Descend aerial ladder if it is still in position at the roof and *team up with the chauffeur for VES of top floor.*
- B. If aerial ladder is not at roof position, roof firefighter shall contact company officer and be guided by his/her instructions.

Note: The roof firefighter should be aware that he/she is the eyes of the IC as far as roof level size up is concerned. Report initial size up and any important additional information as it develops such as penthouse structures, or the inability to ventilate the interior stairs due to:

- 1. No roof level skylight
- 2. Tarred over roof level skylight

IN THESE CASES, A SAW MUST BE CALLED FOR.

10. TOP FLOOR FIRES

- A. Pending arrival of the saw to the roof, the roof firefighter should open all returns.
- B. At top floor fires, vent top floor windows from roof level. He/she is also responsible for **utilization of the saw** to vent the cockloft and top floor when necessary **after** completing initial duties.

2.7 SECOND LADDER COMPANY TO ARRIVE

OPERATIONS

Units responding to any fire should monitor both the department radio and HT transmissions. This will provide members with vital information about conditions at the scene and make them aware of problems encountered by first arriving units, such as water supply problems, people trapped, location and severity of fire, heavy smoke conditions, apparatus blocked out of street, etc.

Along with augmenting the operations of the first ladder company as it pertains to immediate rescue and ventilation, the 2nd ladder is responsible for:

- A. Conducting VES on all floors above the fire.
- B. Examining floors above for fire extension.
- C. Examining rear of building for possible victims.
- D. Examining exposures for extension as ordered by the IC

Note: Common interior shafts may be encountered and must be given serious consideration as they pertain to fire extension. These shafts are often covered at roof level.

If first arriving ladder is a Tower Ladder (TL), the OV position in the rear will be covered by the second to arrive OV.

INSIDE TEAM

(Second Arriving Ladder - Brownstone Building)

TOOLS:

Remain the same.

POSITION:

For other than top floor fires:

To the floors above via the interior for all floors.

If the 2nd ladder company officer finds their access to the floor above blocked by fire on the interior stair, he/she may order a portable ladder raised to the selected floor to attempt access via the exterior or fire escape, if available.

For a top floor fire:

Go into the fire building, checking the floors below to insure fire did not start on lower floor. Be available to assist or relieve the first ladder on the top floor.

Units should remain on the floor below until needed. They shall not block the stair or hallway leading to upper floors.

DUTIES:

Other than augmenting the operations of the 1st ladder company as it pertains to immediate rescue and ventilation, the 2nd ladder company has two GENERAL areas of responsibility:

1. Saving life on floors above the fire and in attached exposures.
2. Controlling extension of fire to floors above and below via heat registers and dumbwaiters and controlling spread to attached exposures.

OUTSIDE TEAM

CHAUFFEUR (*Second Arriving Ladder - Brownstone Building*)

TOOLS: HT
 Flashlight
 The chauffeur shall select the tools that he/she deems necessary to complete assignment.

Note: Maximum use of 6' hooks is expected for top floor fires.

POSITION:

Reports to the turntable area of the 1st ladder Company to assist, or if necessary, ***team up with the chauffeur of the 1st ladder for top floor VES.***

DUTIES:

1. Position apparatus and place in Power Take Off (PTO) for use by his roof firefighter.
2. ***Team up with 1st chauffeur for top floor VES.***
3. If no longer needed at the aerial or for other laddering operations on the front of the building, goes to work where his/her company officer directs.

Note: All members of the Outside Team should be aware when a LSR rescue may be under way. The Outside Team shall be prepared to assist the first arriving ladder as needed.

OUTSIDE VENT (OV) POSITION (*Second Arriving Ladder - Brownstone Building*)

TOOLS: 6' hook
 Halligan tool
 Flashlight
 HT

POSITION:

Except for assisting the chauffeur in front of the building when aerial or portable ladders are needed for rescue or removal, check rear for trapped occupants and insure that ventilation has been completed.

DUTIES:

1. Check rear for trapped occupants and to assure ventilation has been completed. This is especially important if the first to arrive ladder is a TL, as the first to arrive OV will be operating in the bucket in front of the building.
2. Be available to assist in rear laddering if necessary.
3. Return to the front of the building in case there is a need to get to the floors above via portable ladder or aerial ladder ***when teamed up with another member.***
4. If not needed for ladder operations, report in to his/her officer above the fire.
5. For a top floor fire, after checking the rear, report to the roof to assist in ventilation and opening up of the roof, or go into an exposure as directed by his/her officer.
6. If a fire escape is present, operate as per Ladders 3. ***The 2nd OV and 2nd roof firefighter (or another available member) shall team up and enter the apartment directly over the fire from the fire escape.***

ROOF POSITION (*Second Arriving Ladder - Brownstone Building*)

Since the aerial of the 1st arriving ladder company may be involved in top floor VES by the time the 2nd ladder company arrives, the roof firefighter of the 2nd ladder company may raise and use his/her aerial as a means of access to the roof.

TOOLS: Halligan tool
 6' Halligan Hook
 Flashlight
 HT

Note: For top floor fires, the saw is taken to the roof with the 6' Halligan hook.

POSITION:

Roof of the fire building to insure the roof has been opened and to assist the first arriving ladder in ventilation and opening up of the roof.

DUTIES:

1. If the 2nd arriving aerial can be raised to the fire building or an exposure, the member assigned to the roof, should attempt access this way.
2. Confirms roof ventilation and/or assists the 1st arriving ladder with ventilation of the floors above the fire to assist his own company's operation within the building.
3. Check for rear fire escape. If present, ***team up with the 2nd OV (or another available member) to search and ventilate all floors above the fire. Remove victims. Pay particular attention to top floor apartments, including the public hall.***
4. Where conditions warrant, commence preliminary ventilation of adjoining building roofs.
5. If there is no apparent need for his/her presence on the roof, reports to officer, via HT, for further duties.
6. **For a top floor fire**, go to the roof with the saw and Halligan hook to assist in ventilation and opening up.
7. **For fire below the top floor**, be alert to first arriving roof firefighter's request for a saw because of the inability to ventilate the interior stairs due to no roof level skylight (tarred over skylights), dumbwaiters and penthouse structures.

2.8 **FIRST LADDER COMPANY TO ARRIVE -TOWER LADDER**

TOWER LADDERS AND AERIAL LADDERS SHALL OPERATE THE SAME EXCEPT:

INSIDE TEAM

(First Arriving Ladder Company is a Tower Ladder)

TOOLS, POSITION AND DUTIES:

Remain the same.

OUTSIDE TEAM

Tools, position, and duties remain the same with the following exceptions:

CHAUFFEUR:

Position- Remain at pedestal for overall safety, control, and coordination.

OUTSIDE VENT:

Position- Operates as basket firefighter for *ventilation*.

Duties-

- A. *If the basket is used for roof access the saw and life saving rope will be brought to the roof. The OV will wait for completion of roof size up before repositioning the basket to the fire floor for ventilation.*
- B. *After venting the fire floor, reposition the basket to the top floor for ventilation.*
- C. *Prior to entry and search of the top floor the OV shall team up with the roof firefighter (or another available member).*

ROOF:

Position- Roof of fire building.

Duties-

- A. *Proceed to the roof via:*
 - ◆ *The basket*
 - ◆ *The 2nd arriving aerial ladder*
 - ◆ *The adjoining building*

Note: A visible life hazard will negate the initial use of the TL basket for roof access.
- B. *After completing initial roof duties he/she shall team up with the OV for top floor VES.*

2.9 SECOND LADDER COMPANY TO ARRIVE (*When First Arriving Ladder is a Tower Ladder*)

TOOLS, POSITIONS AND DUTIES:

All remain the same **except** for chauffeur as noted below.

Note: When the first to arrive ladder company is a TL, the chauffeur will remain on the pedestal. Therefore the chauffeur of the **2nd to arrive** ladder company does not have to report to the pedestal and may be assigned other duties by his/her company officer: e.g.

- A. Examination of exposures.
- B. Assist with roof operations.
- C. ***Be available to team up with another available member, if needed.***

3. ENGINE OPERATIONS

Fires discussed are to be considered of such magnitude as to require the use of one or two hand lines for extinguishment. All interior hand lines stretched will be considered 1 ¾". Reason for use: Speed, mobility, and close quarters.

3.1 Cellar Fires

- A. **First Line**
First line stretched through the front door on the first floor, then down to the cellar via the interior cellar stairs to extinguish the fire. If the fire has control of the first floor, or the first floor and the cellar, the first line must be stretched to the second floor by way of the outside stairs. This will enable the occupants to escape, and ladder companies to perform VES.
- B. **Second Line**
Second line stretched above the fire. If the first line was used to secure the stairs, the second line will be stretched to extinguish the fire.
- C. **Third Line**
If a third line is necessary, it will be stretched as ordered by the Incident Commander.

3.2 Fire On Upper Floor

- A. **First Line**
Since there is generally no problem with access on upper floors, the first line is taken through the front door to the fire floor.

- B. Second Line
 Stretched to back up the first line. Heavy fire condition in this type of occupancy necessitates the use of a second line for the following reasons.
 - 1. Protect the advance of the first line.
 - 2. Safeguard against burst lengths.
 - 3. Quicker extinguishment.
 - 4. Less punishment for members.

- C. Third Line
 If a third line is necessary, it will be stretched as ordered by the Incident Commander.

3.3 Building Fully Involved

When a building is fully involved, the first arriving engine company should drop two hand lines in front of the fire building and position the apparatus for the possible use of the multiversal nozzle or to supply a TL.

- A. First Line
 Advanced into the fire building through the front door.

- B. Second Line
 Advanced into the building as a back-up line.

- C. Third Line
 - 1. If fire is reported in an exposure, stretched to that exposure.
 - 2. If there is no fire in the exposures, stretch through an exposure to the rear yard of the fire building.

4. BATTALION CHIEF RESPONSIBILITIES

- 4.1 On arrival, contact the company officer in command with regard to the orders he/she has issued to units. Take a position in front of the fire building. Give size-up report via the department radio.
- 4.2 As units arrive, assign specific tasks for them. Determine the need for multiple alarms.
- 4.3 Get reports from units on the progress of their specific operations, especially if a LSR rescue is required or is in progress in rear of the building.
- 4.4 Determine if the fire has extended into exposures, in the cellar or the cockloft. The aide can be sent to determine conditions, and whether openings need to be made. This may be mandatory if both ladder companies on the scene are heavily involved in operations in the fire building or the 2nd due ladder is delayed.
- 4.5 Enter the fire building for a closer look at operations and to determine the physical condition of the firefighters. In this manner the need for multiple alarms for firefighting and relief purposes can be anticipated.
- 4.6 *For a fire in a completely sprinklered building, where the fire is normally confined to one room, the IC should have the sprinkler shut down when appropriate.*

Note: With fires on the lower floors, a heavy concentration of carbon monoxide (CO) may be present in the cellar.

5. ROW FRAMES

All members shall comply with the provisions of AUC 329. When giving assignments, the Officer on duty shall ensure members are reminded of their designations as safety team members. These members must be aware that this designation is based on their unit's order of arrival at the box and will change as additional units arrive. While operating members shall pay particular attention to the following provisions of Sections 1.2 and 1.3 which state:

“When a fire progresses past the incipient stage, the fire area must be considered an IDLH atmosphere. Every member entering the IDLH must be equipped with personal protective equipment and a self-contained breathing apparatus. No member shall enter an IDLH atmosphere unless the member teams-up with at least one other member and remains within voice or visual contact with that member.”

“If a known life hazard is found and immediate action could prevent the loss of life, appropriate action (rescue activity) may be taken by the individual member. This applies only for a known life hazard, not for standard search and rescue activity. If such action is taken, the Incident Commander must be immediately notified and appropriate adjustments made.”

5.1 General Description

5.1.1 These buildings, as the name implies, are built in rows containing as many as twenty or more buildings. They vary in height from two to five stories, are twenty to thirty feet in width, with depths ranging from forty to sixty feet. When constructed, each builder may have used varying designs, i.e., with stoop similar to brownstones but all wood; with or without cornices. They were constructed over a period of many years in the 1800's and early 1900's. Many are found throughout the city.

5.1.2 The room arrangement will vary with design of building.

- A. One type is similar to the Brownstone layout of rooms. They generally have three front windows per floor with one apartment going front to rear and no rear fire escape (See Figures 11 & 11A).
- B. Another type is the railroad flat with two apartments per floor. They generally have four windows across the front, with a rear fire escape (see Figures 12 & 12A). The depth of the building will determine the size and number of rooms.
 - 1. There may be a dumbwaiter shaft present.
 - 2. The presence of light shafts is also a possibility (See Figure 12A).

5.1.3 These buildings can be either balloon frame or braced frame construction (See Figures 9 & 10).

5.2 Other Features Encountered

5.2.1 These buildings can be considered large rectangular boxes of dry lumber, capable of generating large amounts of heat when burning. There is danger of fire spreading in all directions.

- A. Interior construction is similar to tenements and Brownstones, usually wood lath and plaster, wood studs; caps, and plates forming the outline for walls, door frames, etc.
 - B. All exterior is wood, or a veneer over outer wood sheathing. Fire can travel unseen in the air space formed when vertical wood furring strips are used between a veneer and outer sheathing.
- 5.2.2 The salient feature common to all, regardless of variations in design, is the common cockloft spreading over all the buildings in the row. This cockloft may vary in height from one foot to a height tall enough for a man to stand in.
- 5.2.3 The division walls between buildings are quite frequently no more than the equivalent of a partition wall with nogging present (see Figure 10). Because of age, this nogging presents limited hindrance to fire. The mortar has disintegrated with age leaving many spaces through which the fire can penetrate.
- 5.2.4 Common cornices may be present, but even in buildings in the same row there may be variations. Owners of some of the row buildings may have altered the original construction. The impression that can result is that the cocklofts were constructed at different times, and are not connected to those burning. It is important to determine the extent of the common cockloft which is involved in fire.
- 5.2.5 Common or poorly fire stopped cockloft and cornice permits rapid fire spread into exposures. The term Row Frame is, of course, derived from the fact that these are constructed in rows, often running the length of the entire block.
- 5.2.6 There are many variations in the construction of these buildings. Light and airshafts are found in some, while not in others. Usually the buildings of longer length will have the shafts.
Air and light shafts are of wood, and fire in shafts rapidly assumes blowtorch proportions.
- 5.2.7 To gain entrance to the roof from the interior of the building, there is a scuttle on the roof which is reached by an iron ladder from the top floor. The scuttle is usually near the skylight over the stairs.
- 5.2.8 Many of these buildings have a retail store on the first floor. This may include anything from a grocery to a repair shop.
- 5.2.9 Lack of fire stopping at cellar ceilings may permit fire travel from one building to another. Sometimes the cellar runs under more than one building with no separation. Fire in these cellars endanger two or more buildings.

5.2.10 Common partition walls between buildings readily permit horizontal fire spread to exposures through adjacent walls.

6. EXTENSION AND SPREAD OF FIRE

- 6.1 The life hazard is great due to the large number of occupants and the rapidity with which the fire may spread. Loss of life may occur within the building, or as a result of the occupants jumping from windows.
- 6.2 The major defects or faults in the construction are the lack of the fire stopping and the vast quantity of combustible material used in the construction. Fire can spread in the following manner:
- A. Vertically**
1. Via pipe recesses.
 2. Via light and air shafts.
 3. Auto exposure via front and rear windows, and via siding,
 4. Via interior walls and partitions.
 5. Via false fronts, bay windows, spaces between sheathing and building.
- B. Horizontally**
1. Via the common cockloft from one building to another. As the heat from the fire on a lower floor increases in intensity, the temperature rises rapidly. Smoke and heat will then spread laterally throughout the entire cockloft area. An extremely intense fire will develop in short order. Identifying those buildings already involved will be made more difficult, since we will already have heavy smoke throughout the cockloft.
 2. Fire will spread via the common cornice.
 3. Thin and flimsy walls between buildings will present no stop to fire spread.
 4. In those with cellars common to more than one building, fire will involve both if the fire is of any consequence.
 5. Presence of a store, and the type of business, may add to the fire. Tin ceilings make opening up more difficult.
 6. Wood cellar beams in adjoining buildings, resting on a common wall, may spread fire where they butt.
 7. Fire may also spread from the roof of the fire building to the roof of an adjoining building by ignition of the roof covering.
 8. Via windows and siding to adjoining buildings.

6.3 THE DANGER OF COLLAPSE WITH FIRES IN THIS TYPE OF STRUCTURE IS A FACTOR DESERVING CONSIDERATION.

- A. A heavy fire in the cockloft will burn roof supports and cause the collapse of the roof into the top floor.
- B. Rear walls can pull away from the building and collapse in one section into the yard. Personnel will have to be alert to the possibility.
- C. Collapse of sidewalls is also a danger. This is especially true where buildings within the row have been demolished and removed. Even if walls bordering this gap are braced, the danger is still present.
- D. Indiscriminate removal of structural members during overhauling can cause partial or complete collapse of the building
- E. The weight of a fire escape can cause a complete collapse of an exterior wall.
- F. Brick veneer and stucco facing can collapse in sections or as a complete unit.
- G. Steel plating attached on interior and exterior walls for security purposes adds additional weight increasing collapse potential.
- H. When a serious fire burns out the entire first floor, there is danger of collapse, especially in corner buildings and buildings standing alone.

7. GENERAL AREAS OF RESPONSIBILITY

7.1 First Ladder Company to Arrive

- A. Ladder company operations on fire floor.
- B. Determine life hazard and rescue as required.
- C. Roof ventilation and a visual check of rear and sides from this level.
- D. Ladder as needed.
- E. Vertical and horizontal ventilation.
- F. Check rear of building.
- G. If second ladder company will not arrive within a reasonable time, make interior search and removal of endangered occupants above the fire.

7.2 Second Ladder Company to Arrive

- A. All floors above the fire floor for search, removal, ventilation and to check for fire extension.
- B. Confirm roof ventilation (assist first unit).
- C. Check rear and sides of buildings for extension and victims.
- D. Reinforce laddering and removal operations when necessary.
- E. For fires on top floor, check exposures for extension.

Note: Due to narrow stairs and landings, do not crowd or impede the operation and movement of the first attack line.

8. ASSUMPTIONS

There is a light-to-medium fire situation within the building with one or more rooms involved and both ladder companies and required engine companies will arrive at the scene.

Light Fire Situation: Indicates a fire which can be extinguished with the operation of one hand line and/or hand extinguishers or those that can be readily extinguished without resorting to extinguishing agents.

Medium Fire Situation: Indicates a fire which may be extinguished with the operation of two hand lines.

- 8.1 Ladder Companies will institute a two-team offense that will cover their area of assigned responsibility.

INSIDE TEAM

- A. Officer
- B. Forcible Entry
- C. Extinguisher Firefighter

OUTSIDE TEAM:

- D. Chauffeur
- E. Outside Vent (OV)
- F. Roof Firefighter

- 8.2 For the purposes of this bulletin we are assuming the fire building to be a four-story structure.
- 8.3 Operational procedures will be based on the layout of the building, e.g. Brownstone type layout or Old Law Tenement layout *that are based on those most commonly found, but there are exceptions.*
- 8.4 At top floor fires in the Brownstone type layout, the inside team of the first to arrive ladder company will be responsible for VES of the top floor, including examination of the cockloft.

The second ladder company to arrive will split the company and examine exposures 2 and 4 for extension.

- 8.5 At top floor fires in the Old Law Tenement (OLT) type layout, the inside team of the first to arrive ladder company will be responsible for VES of the fire apartment, including examination of the cockloft.

The second to arrive ladder company inside team will be responsible for VES of the adjoining apartment including examination of the cockloft.

9. FIRST LADDER COMPANY TO ARRIVE

INSIDE TEAM

A. OFFICER (*First Arriving Ladder - RowFrame Building*)

TOOLS: HT
 Hand light
 Officers tool

POSITION:

The door to the fire floor or fire area.

DUTIES:

1. Perform an immediate size-up and give necessary orders.
2. Insure that entry doors at street level are chocked open, to enable the stretching of hand lines or access by other members.
3. Take command of forcible entry, locate the fire, search and remove victims.
4. Maintain control of door to the fire area.
5. Decide whether entry into the fire area by the inside and outside team can be made in safety before a charged line is in position.
6. Control the horizontal ventilation on the fire floor, by the inside and outside team.
7. Proceed to the seat of the fire and try to contain it by shutting a door or using a portable extinguisher. A thorough primary search must be started at this point. Ventilate as required in order to conduct this search, keeping in mind that the fire can be drawn to the area vented. Verify that all parts of the fire floor have been covered.
8. Inform the engine company officer of fire location and any unusual layout that will cause difficulty in reaching the fire. Provide and maintain an unobstructed path through which the hose line can advance. Furniture, appliances or other articles blocking the advance of the line, will have to be moved.
9. Be aware of structural features that would endanger exposures or permit extension, such as shafts, voids, etc. Relay necessary information to the IC.
10. Be aware of and await return of members operating in other locations. Secure information regarding their observations and operations. If any member has not been accounted for in a reasonable time, take prompt action to locate him/her.

11. Company officers must maintain communication with members of the outside team not operating under their immediate supervision, to determine their status. The interval between contacts should be frequent enough to provide for the safety of the firefighter being monitored without monopolizing the HT frequency. This is "Functional Supervision."

Note: Members are under the "Immediate Supervision" of an officer when:

- A. They are within sight and/or hearing of the officer.
 - B. They are working with a search line or hose line which is under the supervision of an officer.
-
12. Insure the safety of his/her members on the fire floor by close supervision. Prior training, combined with adequate communications and control on the fire ground, is necessary for the safety of all members.
 13. Control operations on fire floor that will affect members operating on floor above, e.g. closing a door. Be aware of changing conditions on the fire floor which could endanger units operating on the floors above.
 14. Inform members operating above the fire as to the location of the fire on the fire floor. This will enable them to check for extension in the area directly exposed.
 15. *When necessary, ensure members are reminded of their designation as safety team members.*

B. FORCIBLE ENTRY POSITION (*First Arriving Ladder - Row Frame Building*)

TOOLS: Axe/Halligan (Maul/Halligan)
 Rabbit tool
 Flashlight
 HT*

* in some areas this member is assigned a HT

POSITION:

Door to the fire floor or fire area

DUTIES:

1. Forcible entry.
2. Immediate search and removal of victims.
3. Locate the fire.
4. Ventilate as required and ordered.

C. EXTINGUISHER POSITION (*First Arriving Ladder - Row Frame Building*)

TOOLS: 6' Hook
 Pressurized water extinguisher
 Flashlight

POSITION:

Door to the fire floor or fire area.

DUTIES:

1. Assist in forcible entry.
2. Search and removal of victims.
3. Locate the fire.
4. Use the extinguisher where it can be of any possible help.
5. Ventilate as required and ordered.

OUTSIDE TEAM

D. CHAUFFEUR (*First Arriving Ladder - RowFrame Building*)

The chauffeur must have a working knowledge of the duties and responsibilities of all members of first alarm ladder companies and how they are likely to execute their assignments under different fire situations. Monitoring the HT will be of assistance in making decisions. The chauffeur should have the ability to evaluate a problem and then make a sound decision to cope with it.

TOOLS: HT
Flashlight
The chauffeur shall select the tools that he/she deems necessary to complete assignment.

POSITION:

The front of the fire building.

The chauffeur of an aerial ladder shall not operate in a manner that will in any way impede his/her return to the pedestal and cause a delay in positioning or repositioning the aerial for rescue or removal operations.

The chauffeur must notify his/her company officer of intended destination when leaving this primary position.

DUTIES: - **Brownstone layout (three-window front)**

1. Position and prepare apparatus for complete coverage. If unable to complete this assignment, the IC must be notified.
2. Raise aerial to roof.
3. Wait for completion of roof size-up.
 - A. If roof firefighter indicates need for LSR rescue, the chauffeur shall proceed to roof to assist.
 - B. If roof firefighter indicates no need for rescue, chauffeur will place ladder to top floor for VES. ***He/she shall team up with the 2nd chauffeur (or another available member).***
4. When a fire denies the use of the interior stair to the occupants and there is no rear fire escape, **TOP FLOOR VES IS MANDATORY** if we are going to reach persons who are in a hazardous position, or who have already been overcome.

5. Generally, the window over the main entrance opens into one small room (on all upper floors). The other two windows open into a large room which originally, and in many cases still is, connected railroad fashion to other rooms deeper in the building. **It is best to select one of these windows for VES, instead of the window over the main entrance.**
6. In a fire involving interior stairs, egress from the small room above the main entrance (on each floor) may be cut off. A similar type room may be found in the rear. Early attention must be given to search of these rooms.
7. The only variation from this procedure shall be when there is a known life hazard at another location requiring action. e.g.
 - A. Aerial ladder / portable ladder rescue on the front of the building.
 - B. LSR rescue.

Note: This involves the principle of taking care of a known life hazard before moving toward an area of possible life hazard.
8. When fire is lapping out of a lower floor opening, and entry into the top floor via aerial may be delayed until fire has been knocked down, the chauffeur will wait until lapping fire has been eliminated, then vent all windows on top floor. Entry into the top floor via aerial may then be attempted if the second to arrive ladder company has not already “made” the top floor via the interior.

DUTIES: - Old Law Tenement layout (4-window front)

1. Position and prepare apparatus for complete coverage. If unable to complete this assignment, the IC must be notified.
2. Raise and use aerial and/or portable ladders for rescue purposes.
3. Raise aerial for roof access by roof firefighter.
4. After roof firefighter has reached the roof, reposition aerial for VES of the fire apartment if fire is on the 3rd floor or above ***when teamed up with the 2nd chauffeur (or another available member).***
5. If fire is on the 1st or 2nd floor, VES the fire apartment from the exterior using portable ladders when necessary.
6. After VES of the fire apartment is complete, the aerial may be used for VES of adjoining apartment and/or floors above.

Note: Partitions that separate apartments are not fire stopped between the ceiling of one floor and the underside of the floor above. This may permit lateral extension across the building and could result in an unusually heavy smoke condition in the apartment that is not directly over the fire apartment.

E. OUTSIDE VENT POSITION (*First Arriving Ladder - RowFrame Building*)

TOOLS: 6' hook
Halligan tool
Flashlight
HT

Note: For top floor fires, the saw is taken in place of the hook.

POSITION:

Except for assisting the chauffeur in front of the fire building when aerial or portable ladders are needed for rescue or removal, assignment is to ventilate the fire area from the exterior providing lateral ventilation, **as coordinated with the Inside Team.**

Top Floor Fire:

Proceed to roof with saw and Halligan tool. If possible, descend fire escape and provide VES. If unable to descend the fire escape, notify company officer, attempt to vent fire apartment from roof level, and then assist roof firefighter with roof vent.

DUTIES:

1. Assist chauffeur in any ladder rescue that may be required on the front of the building.
2. **NO FRONT LADDER RESCUE REQUIRED:**
If ladder rescue is not required at the front of the building, the OV shall immediately make his/her way to the rear, to perform outside vent of floors within reach.

Note: At "Brownstone type" RowFrames, the 10' hook or the 10' scissor ladder can be taken to the rear to assist in venting and/or gaining access as outlined in Brownstone Operations.

3. **REAR RESCUE NEEDED**
If on arrival at the rear, a person is seen trapped on an upper floor, the OV should do the following:
 - A. Notify company officer and the IC of the floor and the exact location of the victim.
 - B. If there is a rear fire escape, ascend same and assist victim.
 - C. If there is no rear fire escape, reassure victim and determine if a portable laddering operation is practical.

- D. If the OV determines that a laddering operation **is practical**, he/she may initiate such an attempt. Generally, there is less effort and manpower involved than a LSR rescue. It is usually a safer operation for the members involved. In this case the OV should:
1. Notify the IC.
 2. Determine what size ladder is needed.
 3. Determine the most accessible route to the rear.
- E. If the OV determines that it is **impractical** to get a portable ladder to the rear due to room layout, hallways, remodeling, fences between yards, etc. the OV will have to make a decision whether to stay in the rear reassuring the victim that help is on the way or proceed to the roof and assist with a LSR rescue.

This decision should be based on:

- ◆ The emotional state of the victim
- ◆ The fire/smoke condition in the immediate vicinity of the victim.
- ◆ The location and severity of the fire.

4. NO REAR RESCUE NEEDED

When no rear rescue is needed, and the OV is able to enter and search, he/she shall be teamed up with another available member. If unable to team up with another member or if unable to enter for search, he/she shall return to the front of the building to team up with the chauffeur for top floor VES.

5. BUILDINGS WITH FIRE ESCAPES

- A. *If building has a fire escape, the OV will operate as outlined in Ladders 3. He/she shall team up with the roof firefighter (or another available member) to VES the fire floor and, if not needed for search on that floor, proceed to VES the floors above.*
- B. It is **extremely important** for the OV to notify his/her officer and the IC of the presence of rear fire escape via the HT.

F. ROOF POSITION (*First Arriving Ladder - RowFrame Building*)

TOOLS: Halligan tool
6' Halligan Hook
Flashlight
HT
Life Saving Rope (LSR)

POSITION:

THE ROOF OF FIRE BUILDING. Roof ventilation is critical for search, rescue and extinguishment of the fire. NOTHING SHALL DETER the member assigned the roof position from carrying out his assigned duties. The duties of the roof firefighter demand an experienced, observant and determined firefighter capable of decisive action.

ACCESS TO THE ROOF: (*Order of Preference*)

1. AERIAL LADDER

- A. Access through adjoining building is often difficult and undependable.
- B. Eliminates possibly time consuming forcible entry and needless structural damage to other than the fire building.
- C. Scuttle ladders, the usual means of access to the roof, are often loose, broken, or missing.
- D. Scuttle covers are often locked, chained, nailed and/or completely tarred over.
- E. Area in vicinity of scuttle ladder is frequently used for storage of excess household furniture, bicycles, boxes of clothing, etc.
- F. Size of scuttle opening is narrow, making it difficult to get through, especially with a mask, tools and LSR.
- G. As will be noted in a subsequent section, the aerial normally will be raised at these operations to facilitate VES of top floor.
- H. With the roof firefighter ascending via aerial, there is visual assurance that member is in position.
- I. The aerial will be in position for rapid ascent by the chauffeur and additional personnel, in the event immediate LSR rescue in the rear is required.

2. 2ND ARRIVING AERIAL LADDER (IF AVAILABLE)

ROOF POSITION (*First Arriving Ladder - RowFrame Building*)

3. ACCESS VIA ADJOINING BUILDINGS

- A. Aerial ladder rescue must be performed.
- B. Apparatus will be blocked out of the street or otherwise delayed.
- C. Street conditions, e.g. overhead wires, trees, etc., will negate the use of the aerial.
- D. The immediate adjoining building **should not be used** for access to the roof due to the possibility of cockloft involvement.

DUTIES:

The responsibility of this position covers three broad areas:

- ◆ Life
 - ◆ Communication
 - ◆ Ventilation
1. Take out the glass skylight immediately over the interior stair. Reach down with hook to break glass draft stop at ceiling level. (Units below shall be warned by HT prior to breaking glass.) Always break out a small piece of glass first, as a warning to members moving up the stair below, before breaking the remaining larger sections of glass. Members moving up stairs should stay close to wall, keeping hands off stair rail until all skylight glass has dropped.
 2. Check for presence or lack of rear fire escape. This information must be relayed to company officer.
 3. Survey the rear, and shafts of the building for trapped occupants and/or persons who have jumped in to the yard.

NOTE: VENTILATION OF SKYLIGHT AND DRAFT STOP SHOULD BE DONE PRIOR TO CHECKING THE REAR.

4. IF TRAPPED OCCUPANTS ARE NOTED
 - A. Assure the victim help is on the way. This is necessary to deter the victim from jumping, keeping the victim at the window until they can be reached via the interior or from the exterior.
 - B. Contact the company officer via HT informing him of the exact location of the trapped occupant, so a concentrated inside rescue attempt may be made. An acknowledgment of the above message must be received.
 - C. If a LSR rescue is required, contact the chauffeur via HT for his/her assistance on the roof. If the aerial ladder is to be used as a substantial object to tie off the LSR, notify the chauffeur to reposition if necessary.
5. IF NO TRAPPED OCCUPANTS ARE NOTED
Notify the chauffeur that LSR rescue operation is **not needed**.
6. Vent windows to upper floors (be careful of creating an auto-exposure). This operation is based on the members carrying utility cords. Their presence should be verified at roll calls, along with protective clothing, gloves, flashlight, chocks, etc.
7. Open any remaining skylights and returns.
8. Open up roof scuttle cover.
 - A. Persons attempting to escape via the roof may have been trapped and / or overcome under the scuttle enclosure.
 - B. There may be a door on the closet leading to the scuttle. Fire or excessive heat may be immediately behind the door.
Do not descend the scuttle ladder to open this door.
9. IF BUILDING HAS A REAR FIRE ESCAPE
The roof firefighter will, after completing roof duties, initiate upper floor VES as per Ladders 3. *He/she shall team up with the OV (or another available member) to VES the fire floor and, if not needed for search on that floor, proceed to VES the floors above.* The member will notify officer via HT that he/she is leaving primary area of responsibility and initiating such search. **THE SCUTTLE LADDER SHALL NEVER BE USED TO DESCEND TO THE LOWER FLOORS UNLESS THE FIRE IS UNDER CONTROL.**

10. IF THERE IS NO REAR FIRE ESCAPE
After completing roof duties the roof firefighter shall:
- A. *Descend the aerial if it is still in position at the roof and team up with the chauffeur for VES of the top floor.*
 - B. *If the aerial ladder is not in position at the roof, contact his/her company officer and be guided by his/her instructions.*

Note: The roof firefighter should be aware that he/she is the eyes of the IC as far as roof level size-up is concerned. Report initial size-up and any important additional information as it develops, such as the inability to ventilate the interior stairs due to:

- A. No roof level skylight.
- B. Tarred over roof level skylight.

IN THESE CASES, A SAW MUST BE CALLED FOR.

11. At top floor fires, vent top floor windows from roof level. He/she is also responsible for **utilization of the saw** to vent the cockloft and top floor when necessary **after** completing initial duties. If possible, the roof of the fire building should be cut directly over the fire.

10. SECOND LADDER COMPANY TO ARRIVE

10.1 OPERATIONS

Units responding to any fire should monitor both the department radio and HT transmissions. This will provide members with vital information about conditions at the scene and make them aware of problems encountered by first arriving units, such as water supply problems, people trapped, location and severity of fire, heavy smoke conditions, apparatus blocked out of street, etc.

Along with augmenting the operations of the first ladder company as it pertains to immediate rescue and ventilation the 2nd ladder is responsible for:

- A. **All floors above the fire floor** for search, removal, ventilation and to check for fire extension.
- B. Confirm roof ventilation (assist first unit).
- C. Check rear and sides of buildings for extension and victims.
- D. Reinforce laddering and removal operations when necessary.
- E. For all fires other than top floor fires, the Inside Team and Outside Team will operate on the floors above the fire floor as per Ladders 3 in OLT type layout (4-window front).

Note: The window configuration and apartment layout are based on those most commonly found, but there are exceptions.

- F. For fires on top floor:
 - 1. In Brownstone type, split the company and examine exposures for extension in the cockloft. The inside team should operate in the most severely threatened exposure.
 - 2. In OLT type, the inside team will proceed to the top floor of the fire building and be responsible for VES of the adjoining apartment, including examination of the cockloft.

In both situations described above, the chauffeur, after he/she is no longer needed at the aerial or for other laddering operations on the front of the building, goes into an exposure as directed by company officer.

Note: Common interior shafts may be encountered and must be given serious consideration as they pertain to fire extension. These shafts are often covered at roof level.

10.2 TOP FLOOR FIRE: - Brownstone Type (3-window front)

INSIDE TEAM

(Second Arriving Ladder - RowFrame Building - Brownstone Type)

TOOLS: Remain the same.
 Consideration should be given to the extinguisher firefighter taking two 6' hooks in lieu of the pressurized water extinguisher. The forcible entry firefighter can assist with the pulling of ceilings, once finished with other duties.

POSITION:
Initially, the top floor of the most severely threatened exposure.

DUTIES:

1. VES top floor of exposure.
2. Examine the cockloft. Make inspection holes in the ceiling of each room to check for fire extension. Don't pull the entire ceiling until a charged line is in position.
3. If fire is discovered in the cockloft, the IC must be notified immediately.
4. If it is determined that a stop of the fire can be made in this building, a hand line must be called for.
5. If a stop cannot be made in this building, they must move to additional exposures to determine boundaries of the fire spread. This might entail skipping a building at a fast spreading fire.

OUTSIDE TEAM

(Second Arriving Ladder - RowFrame Building - Brownstone Type)

CHAUFFEUR

TOOLS: Remain the same.

POSITION: Front of building.

DUTIES:

1. Position apparatus for laddering operations on the front of the fire building for rescue purposes and / or roof access.
 The need for rescuing trapped occupants shall take preference when positioning apparatus.
2. If no longer needed at the aerial, goes into an exposure as directed by his/her officer. VES the top floor and examine the cockloft as per Inside Team duties.
Note: If exposed building is an IDLH area then members shall team up before entering exposures.

OUTSIDE VENT (OV) POSITION: *(Second Arriving Ladder - Top Floor Fire)*

TOOLS: 6' Hook
 Halligan Tool
 HT
 Flashlight

POSITION:

Except for assisting the chauffeur in front of the building when aerial or portable ladders are needed for rescue or removal, check rear for trapped occupants and insure ventilation has been completed.

DUTIES:

If building has a rear fire escape operate as per Ladders 3, performing VES of top floor ***when teamed up with 1st OV (or another available member). If there is no rear fire escape, he/she shall team up with the chauffeur for exposure examination or he/she shall proceed to the roof.***

ROOF POSITION *(Second Arriving Ladder - Top Floor Fire)*

TOOLS: Saw
 6' halligan hook

POSITION: Roof

DUTIES:

Assist in ventilation of fire building and necessary exposures. If the fire is on the top floor and in the cockloft, both roof firefighters work together to vent roof with the saw.

If possible, cut so at least two rooms will be vented. After initial holes are cut and opened, start enlarging this hole to provide additional ventilation. This may retard the lateral spread of the fire in the cockloft.

Make examination holes in the returns of the exposures. Use caution in opening returns as the fire may suddenly vent and cause face burns to the members operating. Check for extension, and report the results to company officer and IC.

Caution should be exercised when choosing returns to be opened. Returns remote from the fire should be avoided, as this action could spread the fire in the cockloft.

10.3 TOP FLOOR FIRE - Old Law Tenement Type RowFrame Building(4-window front)

INSIDE TEAM

(Second Arriving Ladder - Top Floor Fire)

- TOOLS: Remain the same.
- POSITION: Top floor fire building, adjacent apartment for VES as per Ladders 3.
- DUTIES: VES adjoining apartment top floor including examination of the cockloft for extension.

OUTSIDE TEAM

CHAUFFEUR *(Second Arriving Ladder - Top Floor Fire)*

- TOOLS: Remain the same.
- POSITION: Front of building.
- DUTIES:
1. Position and prepare apparatus for laddering operations on the front of the building for rescue purposes and/or roof access. The need for rescuing trapped occupants shall take preference when positioning apparatus.
 2. If no longer needed at the aerial, or for other laddering operations on the front of the building, goes into an exposure as directed by his/her officer.
Note: If exposed building is an IDLH area then members shall team up before entering exposures.

OUTSIDE VENT (OV) POSITION *(Second Arriving Ladder - Top Floor Fire)*

1. *Operate* from the fire escape as per Ladders 3 **performing VES of the top floor when teamed up with 1st OV (or another available member).**

ROOF FIREFIGHTER *(Second Arriving Ladder - Top Floor Fire)*

- TOOLS: Saw
 6' Halligan Hook
- POSITION: Roof
- DUTIES:
1. Assist in ventilation of roof of fire building and necessary exposures. If the fire is on the top floor and in the cockloft, both roof firefighters work together to vent roof with the saw.
 2. If possible, cut so at least two rooms will be vented. After the initial hole is cut and opened, start enlarging this hole to provide additional ventilation. This may retard the lateral spread of the fire in the cockloft.

3. Make examination holes in the returns of the exposures. Use caution in opening returns as the fire may suddenly vent and cause face burns to the members operating. Check for extension, and report the results to company officer and IC.
4. Caution should be exercised when choosing returns to be opened. Returns remote from the fire should be avoided, as this action could spread the fire in the cockloft.

11. FIRST LADDER COMPANY TO ARRIVE -TOWER LADDER

TOWER LADDERS AND AERIAL LADDERS SHALL OPERATE THE SAME EXCEPT:

INSIDE TEAM

(First Arriving Ladder is a Tower Ladder)

TOOLS, POSITION AND DUTIES:

Remain the same.

If necessary the Officer may dispatch a member of the forcible entry team to team up with the Roof firefighter after they have forced the door to the apartment.

OUTSIDE TEAM

Tools, position, and duties remain the same with the following exceptions:

CHAUFFEUR:

Position- Remain at pedestal for overall safety, control, and coordination.

OUTSIDE VENT:

Position- Operates as basket firefighter for *ventilation*.

DUTIES:

A. *If the basket is used for roof access the saw and life saving rope will be brought to the roof.*

B. ***BROWNSTONE TYPE:***

The OV will wait for completion of roof size up before repositioning the basket to the fire floor for ventilation. After venting the fire floor, reposition the basket to the top floor the OV shall team up with the roof firefighter (or another available member).

C. ***OLD LAW TENEMENT TYPE:***

The OV will wait for completion of roof size-up before repositioning the basket to the fire floor for ventilation.

ROOF:

Position- Roof of fire building.

DUTIES:

A. Proceed to the roof via:

- ◆ *The basket*
- ◆ *The 2nd arriving aerial ladder*
- ◆ *The adjoining building*

Note: A visible life hazard will negate the initial use of the TL basket for roof access.

B. BROWNSTONE TYPE:

After completing initial roof duties he/she shall team up with the OV for tope floor VES.

C. OLD LAW TENEMENT TYPE:

Roof operations remain the same as in SEC. 9 F.

If necessary, the officer may request the Roof firefighter to perform outside ventilation of the fire apartment from the fire escape after completion of preliminary roof ventilation (bulkhead, scuttle, skylight). He/she proceeds via the fire escape to the fire floor to perform ventilation. If entry and search is to be made, he/she shall be teamed up with one of the following:

- ◆ *2nd Roof firefighter*
- ◆ *a member of the forcible entry team*
- ◆ *another available member*

12. SECOND LADDER COMPANY TO ARRIVE (*Tower Ladder On Scene As First Arriving Ladder Company*)

TOOLS, POSITIONS AND DUTIES:

All remain the same **except** for chauffeur as noted below.

Note: When the first to arrive ladder company is a TL, the chauffeur will remain on the pedestal. Therefore, the chauffeur of the **second to arrive** ladder company does not have to report to the pedestal and may be assigned other duties by his/her company officer, e.g.:

- A. Examination of exposures.
- B. Assist with roof operations.
- C. *Be available to team up with another member, if needed.*

13. ENGINE OPERATIONS

13.1 Fire conditions discussed are to be considered of such magnitude as to require the use of two or more hand lines for extinguishment. Fires in row frame houses are particularly vulnerable to the quick spread of fire due to their basic design and use of combustible construction material. Speed, operating in close quarters, and mobility of operation are of prime importance, therefore all interior hand lines stretched will be considered 1 3/4”.

- A. Officers of all engines arriving at fires will take positions at serviceable hydrants. They shall be alert to initiate in-line pumping when it would increase the speed of the operation, and make hose lines available in front of the fire building.
- B. The officer should realize that the use of booster tank water, while the ECC is hooking up to hydrant, will make for a speedier operation. The officer must be informed when the pumper is receiving water from the hydrant.
- C. An engine company, ordered to stretch a line to the top floor of an exposure for purposes of extinguishing the fire in the cockloft, should take a six-foot hook to pull ceilings.

13.2 Cellar Fire

- A. *First line*
 - 1. First line through the front door, then to the cellar via the interior stairs to extinguish the fire.
 - 2. If this line cannot be advanced down to the cellar due to the intensity of the fire, it shall be used to protect the public hall, interior stairs, and the first floor, allowing the occupants to leave the building, and the ladder company to perform VES.
 - 3. The first line can be advanced to the top floor to cover any extension to that area or the cockloft after the cellar fire has been controlled by the second line. Intervening floors shall be checked for fire on the way to the top floor. A member must be stationed on the landing to warn of any fire that may break out below them.
- B. *Second line*
 - 1. If the first line has advanced into the cellar, the second line shall extinguish any fire on the first floor then proceed to the top floor as in A3 above.
 - 2. If the first line is used to cover the public hall, etc., the second line will be stretched into the cellar via the outside cellar entrance to extinguish the fire.
- C. *Third line*

The Incident Commander should order a third line stretched to the top floor of the fire building if units operating the first and second lines cannot complete their assignment in A and B above.

13.3 Fire On Upper Floor

- A. *First line*
The first line should be stretched to the location of the fire via the interior stairs. This line will need to have sufficient length to cover the entire building.
- B. *Second line*
The line should be stretched to the top floor or to the floor above. If a fire is reported in the exposure, the second line may be more effective being stretched to the exposure, with the third or fourth line stretched to back up line #1. This line will need to have sufficient length to cover the entire building
- C. *Third line*
If necessary the Incident Commander should order a third line stretched as needed:
 - 1. To the fire building.
 - 2. To exposure.
 - 3. To supply a tower ladder.
 - 4. Through an exposure to the rear yard.

13.4 Building Fully Involved and Fire in Exposures-Holding Operation

- A. When a building is fully involved with fire showing in exposure(s) the first arriving engine company should stretch one 3 1/2" supply line for a tower ladder, and a handline for entering the building. Prior to the use of the TL stream, multiversal nozzle on the pumper, or heavy caliber stream, consideration must be given to the life hazard and the need for advancement of an interior line.
- B. *First line*
The first line is stretched into the fire building through the front door.
- C. *Second line*
The second line is stretched to the top floor of the most severe exposure. This line will be needed to protect the cockloft, and interior shafts. While proceeding to top floor check intermediate floors for fire.
- D. *Third line*
The third line is stretched to the top floor of the opposite exposure. This line will be needed to protect the cockloft, and interior shafts. While proceeding to top floor check intermediate floors for fire.
- E. *Fourth line*
Stretched as ordered by the Incident Commander.

13.5 Second Alarm or Extra Engines

It is expected that any lines stretched after line #1 and line #2 will be under the direction of a chief, and that these lines will be strategically placed to confine and extinguish the fire. Secondary to the life hazard in row frames, the biggest problem is fire extending to exposures via the cockloft, shafts, and narrow separations between buildings. Lines should be placed between the fire and the exposure. The most severe exposure should be given priority. Any difficulty with the advancement of a line should be relayed via HT to the Incident Commander.

13.6 Vacant Buildings

These buildings are generally vacant due to previous fires. It can be anticipated that they have sustained heavy structural damage.

A. Vacant Buildings in a Row of Occupied Frames

1. The first to arrive engine company should drop two lines: one a 3 1/2" line to supply a TL, and a handline to enter the most severe exposure.
2. *First line*
First line is stretched to most severe exposure.
3. *Second line*
Stretched to the fire building or to the opposite exposure.
4. *Third line*
Stretched to the fire building or to the opposite exposure, depending on where the second line was stretched too.
5. *Fourth line*
As ordered by the Incident Commander.
6. Occupied exposures should be given the first consideration and all operations should be in that direction.
7. A heavy fire requires the use of one or more tower ladders. Hose lines should be laid by engine companies with this in mind.

B. Vacant Building(s) in a Row

1. The first to arrive engine company stretches a 3 1/2" hose line to supply a tower ladder, and stretches a handline for use on the exterior of the building. If necessary, the first engine company can position the apparatus to use the multiversal nozzle. In line pumping should be given consideration in this type of situation.
2. *First line*
Initially operate from the exterior until the tower ladder, multiversal, or a heavy caliber stream can be placed into operation. The handline is then stretched into the most severe exposure.
3. *Second line*
Stretched to the opposite exposure or through an exposure to the rear yard.
4. *Additional lines*
As directed by the Incident Commander.

14. BATTALION CHIEF RESPONSIBILITIES

- 14.1 Fire in these occupancies requires a quick assessment of conditions. All major points involved in the size up, i.e., life, extension, water supply, apparatus, etc., must be evaluated and weighed. A rapid determination must be made as to the adequacy of the assignment or whether a multiple alarm is required.
- 14.2 To determine conditions on arrival, the chief must use the HT to determine the following:
- A. The extent of the fire in the cockloft.
 - B. How many buildings are actually involved in the fire.
 - C. The degree of fire in the rear is a factor, as fire coming out of windows will race laterally along siding, into the windows of the upper floors and adjacent buildings.
 - D. Physical punishment being sustained by members at various points of operations.
 - E. Accessibility to the rear of the building via the street in the rear. Presence of alleys may allow the positioning of TL, a deckpipe on the engine apparatus, and hand lines. This may be easier than stretching lines via the front.
- 14.3 As the fire progresses in the cockloft, the chief must get reports on the stability of the roof. If the fire condition threatens the roof supports, the chief must decide if roof operations should cease and members be ordered off.
- 14.4 Fire escapes in the rear may be in good condition at the start, but as the fire progresses their stability must be checked. The weakening of fire escape supports, due to the fire, may jeopardize men operating on the fire escape or using the gooseneck ladder. If any doubt exist, members should be ordered off all fire escapes and goosenecks.
- 14.5 Units assigned to pulling ceilings on the top floor must be warned that if the fire has gained headway, it is possible for the entire ceiling to be blown down on them. Banked-up gases may ignite quickly and cause this to occur. Small test openings in the ceiling are advisable. Units must report conditions to the IC. The higher the cockloft, the greater the danger. Companies encountering extreme heat and a heavy smoke condition with no visible fire, should be aware that fire is probably burning in hidden spaces such as walls, floors, pipe recesses, and cocklofts. The condition may result in sudden ignition with explosive force.
- 14.6 Most fires in these buildings will be extinguished by first alarm units or an all hands assignment. If we are using all hands and the fire is not under control, it may be necessary to special call an extra engine and ladder to the scene. While no guidelines can be firmly set, the following rules generally apply because of the rapid spread of fire in these buildings:

- A. If a floor is fully involved in fire from the front to the rear a full first alarm assignment is required. It is also advisable to call for an additional engine and ladder.
 - B. If two or more floors are fully involved, or a top floor fire has extended into the cockloft, the need for a second alarm must be considered.
 - C. If two buildings are involved, we have a 2nd alarm situation. Prompt consideration must be given to transmitting a 3rd alarm if it extends beyond two buildings.
- 14.7 If the fire is of a multiple alarm proportion, the strategy is to set up a perimeter of lines consisting usually of heavy caliber streams in the front and the rear, with 1-3/4" lines flanking the sides of the fire and moving toward the center of the fire. As hand lines reach the center of the fire, the outside lines must not be directed into the buildings in which the companies are operating.
- 14.8 *Once charged handlines are in position, ceilings must be pulled to expose and extinguish the fire in the common cockloft. IF possible, this should take place after the cockloft is vented from above to avoid feeding oxygen to the hot gases that will be present.*
- 14.9 *To cut off fire that is traveling in the cockloft toward the exposures, it may be necessary to skip a building in order to get ahead of the fire. The time required to get a line into position must be considered. This line may be driven off the top floor if the fire is already past that point.*
- A. *Once this line has been placed in proper position, it can advance to the center of the fire area by going through the walls between the buildings.*
 - B. *As the fire becomes more controlled, the heavy caliber streams in the rear can be converted to 1-3/4" lines and sent up the rear fire escapes.*
 - C. *Similarly, hand lines now can go to the upper floors of the center fire buildings via the front entrances.*

- 14.10 In major alarm conditions, it is extremely important that chief officers operating at the front and the rear coordinate their operations. It must be clearly understood which building is the fire building, and which are exposures 2, 2A, 2B, and 4, 4A, 4B, etc. This understanding will eliminate lines operating against one another when an interior attack is started. It also prevents the directing of heavy caliber streams on interior lines due to confusion.
- 14.10 It will be necessary to call special units. Transmit radio instructions as to where they are to report, and which operations they will perform. Units responding on additional alarms must also be given instructions.
- 14.11 There are many special units that can be a great asset in extinguishment of fires in these buildings:
- A. TLs are a must due to their great versatility in getting water into inaccessible areas, and in opening cocklofts.
 - B. Satellites can lay 5" hose and a manifold at the front or rear of a building, allowing for shorter and quicker stretches.
 - C. In special cases, the Satellite Water System will be required for fires involving a large number of buildings.
 - D. Many masks will be used. The Mask Service Unit should be available to resupply units.
- 14.12 Where fires have gained headway, it will be necessary to set up brand patrols. The force of updrafts will send large pieces of burning material quite some distance. This probably will start minor fires in the surrounding area.

BY ORDER OF THE FIRE COMMISSIONER AND THE CHIEF OF DEPARTMENT